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AUTHOR Blansitt, Edward L., Jr.
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ABSTRACT

In this paper the bitransitive clause is defined in terms of its nuclear tagmemes: subject, predicate, direct object, and indirect object. A semantic characterization is given of the prototype bitransitive clause with a correlation of situational roles and grammatical functions. The nine different dominant orders in bitransitive clauses which were found in the languages surveyed are discussed as well as some order variations. A tabulation is shown of the languages studied showing the dominant bitransitive order of each language. A set of criteria is proposed for determining the dominant order when different orders occur in the same language in differing grammatical situations. Additional functional values of indirect object markers are discussed. The paper concludes with a list of proposed language universals, and a bibliography with references for both general and specific works in the field, including grammatical descriptions of various languages. (Author/CLK)

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RESEARCH PAPERS

BITRANSITIVE CLAUSES

Edward L. Blansitt, Jr.
The University of Texas at El Paso

FL006323

1. Characterization of bitransitive clauses[1]

The term "bitransitive clause" refers to a clause the essential elements (nuclear tagmemes) of which are subject, predicate (verb or verb phrase), direct object, and indirect object. The bitransitive clause is, therefore, distinct from the unitransitive clause in that (1) in the former an indirect object occurs or may occur while in the latter no indirect object can occur and (2) in that different subclasses of verb occur as predicate head. In ENGLISH 'The boy gave the girl the book' -- which consists of subject (the boy), predicate (gave), indirect object (the girl), and direct object (the book) -- provides an example of a bitransitive clause, while 'The boy saw the book,' consisting of subject, predicate (saw), and direct object -- a structure in which the occurrence of an indirect object is not permitted ('*The boy saw the girl the book.') -- is an example of a unitransitive clause.

In some tagmemic grammars, the terms "ditransitive" or "double transitive" are used instead of "bitransitive." When ditransitive is used for bitransitive, unitransitive is usually referred to simply as transitive -- "monotransitive" apparently has not been adopted by any linguist -- a terminology which eliminates the possibility of using "transitive" as a cover term for all clauses in which an object may occur. The terms "double transitive" and "single transitive" are more bulky and therefore less convenient than "bitransitive" and "unitransitive."

The most basic bitransitive clauses semantically involve a transfer in which the transferor appears as grammatical subject, the transferee as indirect object, and the transferred as direct object. The one most basic bitransitive clause may be characterized semantically as a voluntary transfer, not specifically temporary and not specifically involving exchange, intermediary, or motion. This one primary type we shall call the "prototype bitransitive."

The usual verb-phrase head in English prototype bitransitive clauses is give. Some other basic (voluntary transfer) but non-prototype (more complex in terms of semantic components) bitransitive verbs in English are lend, send, bring, take, sell, and rent; e.g.:

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[1] The KIKUYU, LUGANDA, and TIGRINYA data utilized in this study were supplied by Kenyanjui Gatabaki, Dan Jakana-Lule, and Tesfamariam Woldemichael, respectively.

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(1) The boy lent the girl the book.
(2) The boy sent the girl the book.
(3) The boy brought the girl the book.
(4) The boy took the girl the book.
(5) The boy sold the girl the book.
(6) The boy rented the girl the book.

where lend denotes temporary voluntary transfer; send voluntary transfer via intermediary; bring voluntary transfer with motion towards location of speaker or, less commonly, of hearer; take voluntary transfer with motion away from location of speaker; sell voluntary transfer for exchange; and rent temporary voluntary transfer for exchange.[2]

Another class of bitransitive verbs may be characterized semantically -- and in some languages formally — as causative (+ unitransitive). Such English verbs as teach (cause to learn) and show (cause to see) are bitransitive. In these, the causative agent is bitransitive subject and the causative patient is bitransitive indirect object (unitransitive subject): 'The boy taught the girl the lesson' (bitransitive), 'The girl learned the lesson' (unitransitive); 'The boy showed the girl the book' (bitransitive), 'The girl saw the book' (unitransitive). In most if indeed not all languages, causative-unitransitives typically are structured in the same way as are the basic, i.e. voluntary transfer, bitransitives.

In some languages, clauses which denote a non-voluntary transfer may have bitransitive structure, with the transferee as grammatical subject and transferor as indirect object. In SPANISH, for example,

(7) El muchacho le quitó el libro a la muchacha.
the boy took-away the book (to) the girl
'The boy took the book away from the girl.'

(8) El muchacho le dio el libro a la muchacha.
the boy gave the book to the girl
'The boy gave the book to the girl.'

le here (in both instances) standing in the predicate in cross-reference to a (usually singular) third person indirect object. Again, in TARAHUMARA,

(9) towí oserí éseri tewé
boy book took-away girl
'The boy took the book away from the girl.'

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[2] For a more rigorous semantic componential analysis of certain bitransitive verbs, see the author's "A tagmemic model for cognitive linguistics," to appear in Linguistics at the crossroads, eds. Adam Makkai and Luigi Heilman, Mouton.

has the same structure as

(10) towí oserí árі tewé
boy took gave girl
'The boy gave the girl the book.'

In GAELIC there is a different type of relation between the clause which specifies a voluntary transfer and that which describes a non-voluntary transfer in that the same verb is used in both cases and the difference in situational roles (transferee and non-voluntary transferor) is signalled by a different choice of prepositions (MacLaren, 1971: 103):

(11) Thug e aran do Sheumas
transferred he bread to James
'He gave James bread.'

(12) Thug sibh uam-sa mo chlann.
transferred you(pl.) from-me-emphasis my children
'You took my children away from me.'

The preposition do signals transferee and o—uam is a fused manifestation of o (preposition) mi (1st. sg. pronoun) -- signals transferor. The different orders in which do Sheumas and uam-sa appear in the above examples is attributed to the fact that the former is manifested nominally and the latter pronominally.

Apparently, there is no way to identify corresponding clause types across language boundaries except through the semantic characterization of prototype clauses or of specific sets of basic clauses; thus, once the structure or structures of a prototype clause or set of basic clauses are identified, other clauses having the same structure will be formally specified as members of the same grammatical type. Therefore, in the above SPANISH and TARAHUMARA examples, clauses 8 and 10 are bitransitive because they are structurally identical to 7 and 9 respectively.

The present treatment proceeds on the assumption that the bitransitive clause and the unitransitive clause are emically distinct in all languages. A significant range of observations support this assumption while no counter-evidence has presented itself.[3]

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[3] That some grammars fail to show bitransitive clauses must be attributed to incompleteness; that some grammars simply show the indirect object as an optional tagmeme in the unitransitive clause can only be attributed to inaccuracy.

2. Constituent order in bitransitive clauses

Languages may be classified on the basis of the dominant order of the nuclear tagmemes in the unitransitive clause: subject (S), Predicate (V, for verb), and direct object (O). Joseph H. Greenberg, after surveying what would seem to be an adequate sample of languages, concluded that the dominant order was always one in which the subject precedes the object;[4] subsequent studies have discovered a relatively small number of languages in which the predicate and object both precede the subject in that order,[5] so that the only restriction on dominant unitransitive orders is that the object not be initial. One language classed as VOS is TZOTZIL (Cowan, 1969: 9):

(13) lá snákan ti vínike ti xpétule
seated the man (remote) the Peter (remote)
'Peter seated the man.'

(14) láx yak'be ʔíšim ti vínike ti xpétule
gave corn the man (remote) the Peter (remote)
'Peter gave the man corn.'

There are, therefore, four distinct unitransitive types: SVO, SOV, VSO, and VOS: the other two mathematically possible orders are OSV and OVS, neither of which has been reported as dominant in any language.

Languages may be typologically classified also on the basis of the dominant orders of the nuclear tagmemes in the bitransitive clause, which are the same three as in the unitransitive clause with the addition of indirect object (D, for dative). Given a bitransitive classification, specification of the unitransitive type is apparently redundant, as the unitransitive order is apparently always predictable from the bitransitive order. Nine different dominant orders in bitransitive clauses are found in the languages here surveyed: SVDO, SVOD, SDOV, SODV, SOVD, SDVO, VSOD, VSDO, and VODS. In all of the nine orders except SDVO, the unitransitive type may be determined by simply deleting the indirect object from the bitransitive dominant order:

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[4] Joseph H. Greenberg, 1963.

[5] Russell Ultan, 1969.

Bitransitive Order		Unitransitive Order
SVDO	SVÐO	SVO
SVOD	SVOÐ	SVO
SDOV	SÐOV	SOV
SODV	SOÐV	SOV
SOVD	SOVÐ	SOV
VSOD	VSOÐ	VSO
VSDO	VSÐO	VSO
VODS	VOÐS	VOS

In the languages surveyed only in GUMBAINGAR and, perhaps, MENDE is the relative order of S, V, and O different in the bitransitive and unitransitive clauses. The GUMBAINGAR patterns, nowever, are very specifically described as unitransitive SOV and bitransitive SDVO, with SDOV as a primary alternate order (Smythe, 1948-49: 67):

(15) ŋaidja ŋari ŋja:waŋ bugawada
I him saw grass-on
'I saw him on the grass.'

(16) ŋaidja gi:barinj ŋura:ŋ jura:l
I boys gave food
'I gave the boys food.'

In MENDE, it is difficult to make a clear choice of most basic bitransitive verb between kɔ́ and fe, both glossed as 'give'. The problem is further complicated by the fact that the order, with no subject shown in the illustrations, is DVO for kɔ́ and OVD for fe. The imperative with kɔ́, however, is described as polite as opposed to that formed with fe, described as peremptory. MENDE is a unitransitive SOV language.

There are twenty-four mathematically possible different orders of S, V, O, and D. The data suggest very definitely, however, that neither the direct object nor the indirect object ever occurs initially in the dominant order, leaving only twelve theoretically possible orders of which three are unattested in the languages surveyed. It can be confidently assumed that a unitransitive SVO language will be bitransitive SVDO or SVOD, and there is a clear suggestion, in spite of the fact that the number of VSO languages (twelve) is much smaller than the number of SVO languages (sixty-one) in the survey, that a unitransitive VSO language will be bitransitive VSDO or VSOD. The assumption which follows from the above is that S and V are adjacent in the dominant bitransitive order if and only if they are adjacent in the dominant unitransitive order; the data also suggest categorically that the relative

order of S and V will be the same in both unitransitive and bitransitive orders.[6]

	SV	VS
S & V adjacent	SVDO SVOD	VSDO VSOD
S & V not adjacent	SODV SDOV SOVD SDVO	VODS (VDOS) (VOSD) (VDSO)

If the above assumptions are correct, then if any of the bitransitive orders VDOS, VOSD, or VDSO are subsequently discovered in any languages, they will be of the unitransitive VOS type. The above chart may imply some special similarity between SVO and VSO languages on the one hand, and between SOV and VOS languages on the other. It is interesting to note, however, that VOS languages tend to be closely related genetically to VSO or SVO languages and not to those of the SOV type.

3. Order variation and function marking

In the vast majority of bitransitive clauses, the direct object has an inanimate referent. On the other hand, in some languages the indirect object only occurs with an animate referent. Even when neither the direct object nor the indirect object is overtly marked, some languages allow a large number of alternate orders when the direct object referent is inanimate. In MAPUCHE, a unitransitive SVO language, nine possible bitransitive orders occur: SVOD, SOVD, OSVD, OSDV, VSOD, OVSD, VODS, SDVO, and SVDO. Subject, direct object, and indirect object are all unmarked, but as the nominal with an inanimate referent will be interpreted here as direct object, the only constituents which must be distinguished by order are subject and indirect object. There is no ambiguity, given a semantic specification of the referent, because the subject always precedes the indirect object unless predicate and direct object, in that order, precede both indirect object and subject (Catrileo, 1972: 59-60):

[6] The intransitive clause may not have the same relative order of S and V as do unitransitive clauses. SPANISH is unitransitive SVO and bitransitive SVOD, but intransitive VS.

(17) a. Kuan elufi iyael ti pu wentru. (SVOD)
John gave food the pl. man
'John gave the men food.'

The above is also shown in the SOVD, OSVD, and OSDV orders:

(17) b. Kuan iyael elufi ti pu wentru.
c. Iyael Kuan elufi ti pu wentru.
d. Iyael Kuan ti pu wentru elufi.

(18) a. Iche ngilhalfiñ kiñe chaketa Kuan.
I bought one jacket John
'I bought John a jacket.'

The above is also shown in the VSOD, OVSD, VODS, SDVO, and SVDO orders:

(18) b. Ngilhalfiñ inche kiñe chaketa Kuan.
c. Kiñe chaketa ngilhalfiñ inche Kuan.
d. Ngilhalfiñ kiñe chaketa Kuan inche.
e. Inche Kuan ngilhalfiñ kiñe chaketa.
f. Inche ngilhalfiñ Kuan kiñe chaketa.

There would be no problem distinguishing subject and indirect object in the second set of sentences above even without considering relative positions, because the verb ending -fiñ specifies first person singular subject and third person indirect object. DIOLA FOGNY,[7] in which subject, direct object, and indirect object are also unmarked, allows any order of predicate, direct object, and indirect object: DOV, ODV, DVO, OVD, VDO, and VOD. When both the direct and indirect objects have personal referents, the utterance is made unambiguous by placing both objects on the same side of the predicate with the direct object adjacent to the predicate, i.e., DOV or VOD; DIOLA FOGNY, a unitransitive SVO language, is classified in this paper as SVOD with SDOV as the primary alternate order (Sapir, 1965: 101):

(19) a. nisɛnɛ furiaf ɛjamɛnɛy (VOD)
I-gave food goat
'I gave the goat food.'

The above is also shown in the DOV, ODV, DVO, OVD, and VDO orders:

(19) b. ɛjamɛnɛy furiaf nisɛnɛ
c. furiaf ɛjamɛnɛy nisɛnɛ
d. ɛjamɛnɛy nisɛnɛ furiaf
e. furiaf nisɛnɛ ɛjamɛnɛy
f. nisɛnɛ ɛjamɛnɛy furiaf

[7] When the source grammars are descriptions of a particular dialect of a language, that dialect rather than the language is specified in this paper.

The following sentences illustrate the unambiguous usage with a personal direct object referent:

(20) a. nisɛnɛ akambanaw ajana
I-gave boy girl

b. ajana akambanaw nisɛnɛ
girl boy I-gave

'I gave the boy to the girl.'

A number of languages have different bitransitive orders for unmarked indirect object and for indirect object marked by a relator (preposition or postposition). In some of these languages the same predicate and, semantically, the same transfer may be involved. In ENGLISH, the unmarked indirect object occurs between the predicate and the direct object while the marked indirect object occurs following the direct object:

(21) a. The boy gave the girl some candy.
b. The boy gave some candy to the girl.

Similar alternations occur in DEHU (Tryon, 1971a:40) and in NENGONE (Tryon, 1971b: 36-37).

DEHU examples:

(22) eni a hamæ aŋat la hele.
I give them the knife.

(23) eni a hamæn la tusi koi aŋat.
I give the book to them.

NENGONE examples:

(24) inu či kanon ɔre tusi du bɔn.
I give the book to him.

(25) inu či kano bɔn ɔre ɛte.
I give him the stone.

Other languages in which such alterations occur include ACOOLI, INDONESIAN, MUNDARI, SWEDISH, and SYRIAN ARABIC. All of the above-mentioned languages except MUNDARI and SYRIAN ARABIC are prepositional, of the unitransitive SVO type, and have the bitransitive order SVDO when the indirect object is unmarked and SVOD when it is marked by a preposition. SYRIAN ARABIC is prepositional and is classed as a unitransitive VSO language but with SVO as the primary alternate order; it shares the same type of DO/OD alternation as the other above-mentioned languages (Cowan, 1964:439):

(26) bāʕ ʔəbno l-bēt
he-sold his-son the-house

(27) bāʕ əl-bēt la-ʔəbno
he-sold the-house to-his-son

In MUNDARI, a postpositional and unitransitive SOV language, the order is SDOV when the indirect object is unmarked and SODV when it is marked by the postposition ta' (Cook, 1965: 254):

(28) Gomke dasi talab-e oma'ia.
master servant wages gave
'The master gave the servant wages.'

(29) Ne sadomko ako-ta'-ing omkotana.
horses them-to I-gave
'I gave the horses to them.'

In some other languages the prototype bitransitive clause, and sometimes a number of others, have the indirect object unmarked while certain non-prototype bitransitive clauses have the indirect object marked with the respective orders also SVDO and SVOD. One subgroup of such languages, which includes CHI NYANJA, has the indirect object which occurs with certain non-prototype bitransitive verbs marked prepositionally while that occurring with a number of other bitransitive verbs is unmarked (Missionários da Companhia de Jesus, 1964: 119-20):

(30) ndagulira mai wanga mpeni
I-bought mother my knife
'I bought my mother a knife.'

(31) ndapereka nyemba kwa amai
I-delivered bean to mother
'I delivered the beans to mother.'

In ENGLISH also, some bitransitive verbs, such as 'contribute' (which may be semantically described as denoting a non-temporary voluntary transfer among other transfers from different transferors to the same transferee) are used only with a marked indirect object.

(32) a. I contributed some clothes to the victims.
b. *I contributed the victims some clothes.

In LUO, the prototype bitransitive verb miyo 'give' is used with an unmarked indirect object and other bitransitive verbs occur with the indirect object marked by the preposition ni (Stafford, 1967: 23-24):[8]

(33) Mi ɔtɪɛnɔ chɪɛmɔ.
'Give Otieno food.'

(34) Kɛl nɪ ɔtɪɛnɔ chɪɛmɔ.
'Bring Otieno food.'

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[8] In Stafford's orthography the close front and back vowels are shown in lighter print.

In both cases the LUO bitransitive order is SVDO. Another subgroup, which includes GA and MANDARIN, has "double verb" constructions in which the first verb, which manifests predicate, precedes the direct object and the second verb, which is sometimes a prototype bitransitive verb, functions as a relator and is followed by the indirect object.

In KIKUYU, the indirect object is unmarked and the order is SVDO when the direct object referent is non-personal, but the indirect object is marked prepositionally, by gwï, and the order is SVOD when both the direct and indirect objects have personal referents:

(35) Mũthuri ũriã mukũrũ nĩanengerire mũtumĩa ihũa. (SVDO)
man old gave woman flower
'The old man gave the woman the flower.'

(36) Mũtumĩa nĩanengerire mwarĩ wake gwĩ kahĩĩ. (SVOD)
woman gave daughter her to boy
'The woman gave her daughter to the boy.'

The situation which prevails in KIKUYU is probably much more common than available data indicate; most of the source grammars used for this study fail to mention or illustrate bitransitive clauses in which the direct object has a personal referent. In ACOOLI the indirect object is either marked and the order is SVOD or, "when there is no fear of ambiguity," the indirect object may be unmarked and the order is SVDO (Crazzolara, 1955:43):

(37) a. ɔkeèlɔ rɛɛc ki làreèmɛ́
he-has-bought fish to friend-his
'He has brought fish to his friend.'

b. ɔkeèlɔ làreèmɛ́ rɛɛc
he-has-bought friend-his fish
'He has brought his friend fish.'

It is very possible that an animate direct object referent might produce a "fear of ambiguity."

In another SVO language, BIROM, the order is SVDO when the direct object has a non-personal referent and SVOD when both objects have personal referents; an indirect object marker, à, is optional (Bouquiaux, 1970:354):

(38) yɛ̀ a-tomo yɛ́ mɛ́
he sent him me
'He sent him to me.'

(39) ba àá-tomo à mɛ́ kìnɔn
they have-just-sent to me little-bird
'They have just sent me a little bird.'

In MOSSI the orders SVDO and SVOD may both occur with the phonologically shorter object manifestation preceding the longer object manifestation; alternately the indirect object may be preceded by a preposition in the SVOD order.

Tabulation of languages investigated in accordance with their dominant bitransitive orders

SVDO or SVOD:	ACCOLI, BIROM, CHI NYANJA, DEHU, ENGLISH, GA INDONESIAN, KIKUYU, MANDARIN, MOSSI, NENGONE, SWEDISH.
SVDO:	ADAMAWA FULANI, ALAWA, BIMOBA, DANISH, GREBO, GUNBALANG, IAI, IGBO, ITONAMA, KAMBA, KHASI, LATVIAN, LITHUANIAN, LUGANDA, LUO, NOMATSIGUENGA, NORWEGIAN, PAPIAMENTU, SWAHILI, VIETNAMESE, XHOSA, XU, YAO, YORUBA, ZULU.
SVOD:	ACHI, BINI, CAMBODIAN, CHORTI, CHRAU, COCAMA, CUA, DIOLA FOGNY, FRENCH, GUARANI, IQUITO, LOGBARA, MAPUCHE, MARGI, MNONG ROLOM, PORTUGUESE, QUICHE, RONGA, RUMANIAN SPANISH, SOUTHERN SIERRA MIWOK, TARASCAN, TOTONAC.
SDOV:	BANGRU, BASQUE, CHALDEAN, ESEEJJA, GEORGIAN, GUJARATI, KANURI, KEWA, MARANUNGKU, NORTHERN HAVYAKA KANNADA, PUNJABI, REMO, TELEFOL, TIGRINYA, TURKISH.
SODV:	KUNJEN, LAMANI, NEPALI, OROKAIVA SOMALI, WESTERN APACHE, WAGEMAN, WIK-MUNKAN.
SDOV or SODV:	EASTERN CHEREMIS, MUNDARI.
SOVD:	HUICHOL, KALKATUNGU, TARAHUMARA, WAILBRI, WESTERN DESERT.
SDVO:	GUMBAINGAR.
SDVO or SOVD:	MENDE.
VSDO:	IXIL, MOLINOS MIXTEC, OSTUACAN ZOQUE, PAPAGO, QUIOTEPEC CHINANTEC.
VSOD:	CHATINO, GAELIC, MAZAHUA, SIERRA POPOLUCA, TAHITIAN, WELSH.
VSOD or VSDO:	SYRIAN ARABIC
VODS:	MEZQUITAL OTOMI, TUMBALA CHOL, TZOTZIL.

Several of the above languages are shown in two separate bitransitive order types. If certain criteria and an order of priority are adopted, it will be possible in some if not most cases to assign languages to only one order type. The following criteria are suggested, shown in the order of decreasing priority:

I. If nominal and pronominal indirect objects occur in different slots, then the slot in which the nominally manifested indirect objects occur is the primary indirect object slot.

Criterion I has, in fact, already been applied in the above classification.

II. If two or more different slots are used for indirect object fillers, only one of which corresponds to the prototype bitransitive clause, then that slot in which the indirect object occurs in prototype bitransitive clauses is the primary indirect object slot.

Application of criterion II will allow classification of CHI NYANJA, GA, and MANDARIN as SVDO languages. If the peremptory feature of the MENDE verb fe is analyzed as an additional semantic component and kɔ́ is therefore taken as the prototype bitransitive verb, then MENDE will be classified as SDVO.

III. If two or more different slots are used for marked and unmarked indirect objects, then the slot used with unmarked fillers is the primary indirect object slot.

Application of criterion III shows DEHU, ENGLISH, INDONESIAN, KIKUYU, NENGONE, and SWEDISH to be SVDO, SYRIAN ARABIC VSDO, and MUNDARI SDOV.

IV. If different slots ard used for personal and non-personal or animate and inanimate indirect objects, and either both are unmarked or both are marked, then the slot which is used for personal or animate referents is the primary indirect object slot.

Application of criterion IV shows BIROM to be of the SVOD type.

After application of the above four criteria, EASTERN CHEREMIS and MOSSI are the only languages in the survey which must still appear double-listed. Additional data about these languages might eliminate all double listings in the classification.

Perhaps of interest is the fact that of the eight languages for which SODV is the only bitransitive order shown, all except WESTERN DESERT and SOMALI have only a relator-marked indirect object and in SOMALI

the indirect object appears marked in some verbs. This fact is interesting, in spite of the small number of languages of this type in the survey, because approximately half of the languages examined have an unmarked indirect object. This observation appears even more important in view of the fact that MUNDARI is SDOV with an unmarked indirect object and SODV when the indirect object is marked. Of those languages classed as SDOV, only six of sixteen have an unmarked indirect object, however, and in EASTERN CHEREMIS, classed as SDOV or SODV, the indirect object is marked.

In the following languages the indirect object is either unmarked or may be unmarked, with any restrictions on the absence of markers indicated by numbers (and explained below):

SVDO: ADAMAWA FULANI, BIMOBA, CHI NYANJA (1), DEHU (2), ENGLISH (2), GA (2), GREBO, GUNBALANG, IAI, IGBO, INDONESIAN (2), ITONAMA, KAMBA, KIKUYU (3), LUGANDA, LUO (4), MANDARIN (1), NENGONE (2), NOMATSIGUENGA, NORWEGIAN, PAPIAMENTU, SWAHILI, SWEDISH (2), VIETNAMESE, XHOSA, XU, YAO, YORUBA;

SVOD: BIROM, CAMBODIAN (5), CHORTI, DIOLA FOGNY, IQUITO, MAPUCHE, RONGA, TOTONAC;

SVDO or SVOD: MOSSI (1, optionally);

SDOV: CHALDEAN, ESEEJJA, KAPAU, KEWA, MARANUNGKU, MUNDARI (2), TELEFOL;

SODV: SOMALI (6), WESTERN APACHE;

SOVD: HUICHOL, KALKATUNGU, TARAHUMARA;

SDVO: GUMBAINGAR (7), MENDE;

VSDO: MOLINOS, MIXTEC, OSTUACAN ZOQUE, PAPAGO, QUIOTEPEC CHINANTEC, SYRIAN ARABIC (2);

VSOD: MAZAHUA, SIERRA POPOLUCA;

VODS: MEZQUITAL OTOMI, TUMBALA CHOL, TZOTZIL.

Restrictions:

(1) with prototype bitransitive verb and some other bitransitive verbs
(2) unless D follows O
(3) unless O has a personal referent
(4) with protytype bitransitive verb
(5) when there is no idea of motion
(6) with some bitransitive verbs
(7) except for some distinct object pronouns

4. Additional functions of indirect object markers

Indirect object markers are usually also used to mark some other function; the most frequent additional values are directional, direct object, and benefactive. By 'benefactive' is meant the person -- although occasionally, the benefactive referent may be impersonal — for whom or for whose benefit an action is performed; e.g., for the teacher is benefactive in I did it for the teacher.

Languages in which the indirect object marker also functions as a directional marker (those marked (1) have an alternate construction with D unmarked and preceding O):

SVDO: DEHU (1), ENGLISH (1) (same marker also used for verbal noun), IAI;

SVOD: CAMBODIAN, CUA, FRENCH (same marker also used for some possessives), GUARANI, LOGBARA, MNONG ROLOM, QUICHE, SPANISH (same marker also used for O);

SDOV: KANURI, NORTHERN HAVYAKA KANNADA, REMO (same marker also used for O and benefactive), TIGRINYA (same marker also used for O), TURKISH;

SODV: OROKAIVA, SOMALI (with some bitransitive verbs);

SOVD: WAILBRI, WESTERN DESERT (reduced form of directional marker, also used for benefactive);

VSDO: SYRIAN ARABIC (1) (same marker also used for benefactive);

VSOD: CHATINO (same marker also used for possessive), TAHITIAN (same marker also used for O), WELSH.

Languages in which the indirect object marker also functions as a benefactive marker:

SVDO: INDONESIAN (when D follows O; also constructed with non-benefactive marker), LUO;

SVOD: CHRAU, MARGI;

SDOV: REMO (same marker also used for O and directional);

SODV: KUNJEN, WAGEMAN, WIK-MUNKAN;

SOVD: WESTERN DESERT (same as reduced form of directional);

VSDO: SYRIAN ARABIC (when D follows O; same marker also used for directional).

Languages in which the indirect object marker also functions as a direct object marker (in some cases only when the direct object referent is definite or personal or both):

SVDO: KHASI;

SVOD: GUARANI (same marker also used for directional), SOUTHERN SIERRA MIWOK, SPANISH (same marker also used for directional), TARASCAN;

SDOV: BANGRU, GUJARATI, REMO (same marker also used for directional and benefactive), TIGRINYA (same marker also used for directional);

SODV: LAMANI (same marker also used for verbal noun), NEPALI;

VSOD: TAHITIAN (same marker also used for directional).

Languages in which the indirect object marker also functions as a possessive marker:

SVOD: LOGBARA (some of the D markers); FRENCH (in some possessive structures), RUMANIAN;

VSOD: CHATINO (same marker also used for directional).

Languages in which the indirect object marker also functions as marker of a verbal noun, "infinitive":

SVDO: ENGLISH (same marker also used for directional);

SODV: LAMANI (same marker also used for O).

In ACCOLI (SVDO), the indirect object marker also functions as an instrumental and accompaniment marker. In LOGBARA (SVDO), one of the several indirect object markers also functions as an accompaniment marker. In PUNJABI (SDOV) the postposition which is used to mark indirect object -- with the noun in the postpositional or oblique form -- is also used with nouns in temporal expressions and in EASTERN CHEREMIS (SDOV or SODV) the indirect object marker is also used to mark future time expressions.

In CAMBODIAN the indirect object is marked by the "minor verbs" tɾu 'go' or mɔ̀:k 'come', as shown in the following examples (Jacob, 1968: 78):

(40) Khɲom ʔaoy siəvphɾu tɾu nɛ̀ək
I give book go you
'I give you the book.'

(41) nɛ́ək ʔaoy siəvphɤu mɔ̀:k khɲom
you give book come I
'You give me the book.'

There may also be no indirect object marker, especially when any "idea of motion" is absent.

(42) lɔ̀:k nìh boŋrìən khmæ(r) khɲom
gentleman this teach Cambodian I
'This gentleman is teaching me Cambodian.'

In SOMALI, relators are described as preceding the verb. The indirect object also precedes the verb and the relator (Bell, 1969: 21-22):

(43) la'agta 'Ali u ɗiib
money Ali to give
'Give Ali the money.'

Another verb, sii, is also, like ɗiib, glossed as 'give' and does not require a relator.

(44) la'agta 'Ali sii
'Give Ali the money.'

The relator u is also used to mark directional, but indicates general rather than specific direction which is signalled by ku.

(45) magaalada ku orod
town-the to run
'Run to the town.'

(46) magaalada u orod
'Run towards the town.'

It is not obvious whether a prototype bitransitive verb can be selected between sii and ɗiib.

It was observed, in section 3 above, that in LUO the preposition nɪ marks indirect object in non-prototype bitransitive clauses. The same preposition also is used as a benefactive marker (Stafford, 1967: 61):

(47) Ɔnyangɔ tiyo nɪ japʊɔnj.
Onyango work for teacher
'Onyango works for the teacher.'

In some languages that use the same marker for the direct object in the unitransitive clause as for the indirect object in the bitransitive clause, the direct object occurs unmarked in the bitransitive clause. This situation prevails in SPANISH:

(48) El hombre vio a su hija.
'The man saw his daughter.'

(49) El hombre le dio el libro a su hija.
'The man gave his daughter the book.'

(50) El hombre le dio su hija al rey.
'The man gave his daughter to the king.'

In SPANISH as in some other languages, the direct object is regularly marked only in the unitransitive clause when the referent is definite and personal. The SPANISH direct object with an animate non-human and definite referent is optionally marked in the unitransitive clause.

(51) Vio los perros./Vio a los perros.
'He saw the dogs.'

In some languages the direct object is always marked and in yet others a marked direct object may occur in free variation with the unmarked in a bitransitive clause.

In TARASCAN, when one object is marked by the postposition ni and the other is unmarked, the marked object is interpreted as the indirect object and the unmarked as the direct object (Foster, 1969: 71):

(52) ínck'utiksi kt'a wárini
they-gave house woman-to
'They gave the house to the woman.'

The direct object "in cases of no ambiguity" may be unmarked. If both objects are marked, the order (SVOD) signals which is which.

(53) xí pákwaakani tatá kúrani míkani
'I will take the priest to Mica.'

(54) xí pákwaakani míkani tatá kúrani
'I will take Mica to the priest.'

In LOGBARA, four different postpositions are used to mark indirect object: nǐ, drí, vö, and véléɛ́. Very subtle nuances separate the markers semantically when used as indirect object markers (Crazzolara, 1960: 24):

(55) é fɛ́ kàlámɔ̀ 'drɪ̈ì 'bá 'dà nǐ/drí
you give pencil these man that to
'Give the pencils to that man.'

The marker nǐ is also used to mark the possessive but when so used has the effect of causing a non-low tone on the preceding syllable to become low, which it does not do when it functions as an indirect object marker. The postposition drí is used also to mark possessive or passive agent (Ibid: 117):

(56) dzɔ́ 'dàrï ɔ́pí drí
hut that chief of
'That hut is the chief's.'

(57) ágú 'dà drà ándrā à'dï drí yà
man that kill formerly who by ?
'Who was that man killed by?'

The postposition vɛ́lɛ́ can be used as a genitive marker and vɔ́ may mark accompaniment in addition to their uses as indirect object markers (Ibid: 122-123):

(58) 'dà Lógbàrà vɛ́lɛ́ dzɔ́
that Logbara of hut
'That is a Logbara hut.'

(59) ɛ̀ri 'ɔ'á à'dï vɔ́ ya
he stay who with ?
'Who was he staying with?'

In XU and YORUBA, both SVDO languages, a particle occurs between the indirect object and direct object when both objects are manifested. The XU particle is ko (Snyman, 1970: 12):

(60) Da'ama |'a !'hwã̄ ko n!ao
child give man ( ) bow
'The child gives the man the bow.'

The particle does not occur in the unitransitive clause (Ibid: 5) —

(61) Da'ama gą̂'u ho n!eng
child clean see eland
'The clean child sees the eland.'

— except between a preceding direct object and following locative (Ibid: 181):

(62) !'Aa !xeiya xei ko taǐer|ho
(proper name) cut bread ( ) table
'!'Aa cuts the bread on the table.'

5. Some proposed language universals derived from the preceding discussion

I. The same nuclear tagmeme which occurs unitially in the unitransitive dominant order will occur initially in the bitransitive order.

The above rules out the possibility of a dominant bitransive order with initial indirect object, which does not occur in the

unitransitive clause, or with initial direct object, which does not occur initially in any of the dominant unitransitive orders, as the initial element in a bitransitive dominant order.

II. If the dominant unitransitive order is SVO, the dominant bitransitive order will be either SVDO or SVOD.

III. If a language of the unitransitive SVO type has different relative orders depending upon whether the indirect object is marked or unmarked, the order is SVDO with unmarked indirect object and SVOD with a marked indirect object.

IV. If the direct object is marked in the unitransitive clause, the indirect object will be marked in the bitransitive clause.

V. If the direct object is marked in the bitransitive clause, then it is also marked in the unitransitive clause.

VI. If the indirect object is marked in the prototype bitransitive clause, it is also marked in a non-prototype bitransitive clause.

VII. If the direct object is marked when its referent is inanimate, it is also marked when its referent is animate; if the direct object is marked when its referent is non-human, it is also marked when its referent is human.

VIII. If the direct object is marked when its referent is indefinite, it is also marked when its referent is definite or unique.

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